



**CLINICAL STUDY OF SOOUL QUINYA BA WAJAH QULLATE
FAULAD DORANE HAMAL (IRON DEFICIENCY ANAEMIA
DURING PREGNANCY) WITH UNANI FORMULATION**

By

JEELANI C.

Dissertation Submitted to the

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore

In Partial fulfilment of the requirements for the degree of

MAHIRE TIB (M.D. Unani)

In

**ILMUL QABALAT WA AMRAZE NISWAN
(OBSTETRICS AND GYNAECOLOGY)**

**Department of Ilmul Qabalat Wa Amraze Niswan
National Institute of Unani Medicine
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Under the Guidance of

DR. WASIA NAVEED

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National Institute of Unani Medicine
Bangalore**

2007

Rajiv Gandhi University Of Health Sciences, Karnataka

DECLARATION BY THE CANDIDATE

I hereby declare that the Dissertation entitled “**CLINICAL STUDY OF SOOUL QUINYA BA WAJAHE QUILLATE FAULAD DORANE HAMAL (IRON DEFICIENCY ANAEMIA DURING PREGNANCY) WITH UNANI FORMULATION**” is a bonafide and genuine research work carried out by me under the guidance of **Dr. Wasia Naveed**, Associate Professor, Dept. Of Ilmul Qabalat Wa Amraze Niswan, Govt. Nizamia Tibbi College, Hyderabad.

Date:

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CERTIFICATE BY THE GUIDE

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Place : Bangalore

ABBREVIATIONS

AmE	American english
ANC	Antenatal care
BrE	British english
CDC	Centre for disease control
D	Day
DALY's	Disability adjusted life years
DMT1	Divalent metal ion transporter-1
Eng	English
Hb	Haemoglobin
HFE	Hemochromatosis gene
Hin	Hindi
HIV	Human immuno deficiency virus
ICMR	Indian council of medical research
IDA	Iron Deficiency Anaemia
INACG	International Nutritional Anaemia Consultative Group
ISM	Indian system of medicine

Kan	Kannada
Kcal	Kilo calories
MCH	Mean corpuscular haemoglobin
MCHC	Mean corpuscular haemoglobin concentration
MCV	Mean corpuscular volume
MHA	Microcytic hypochromic anaemia
NBP	Normal blood picture
Ng	Nano gram
NHA	Normocytic hypochromic anaemia
NIUM	National institute of unani medicine
NNAPP	National Nutritional Anaemia Prophylaxis Programme
OPD	Outpatient department
PCV	Packed cell volume
PHC	Primary health centre
PS	Peripheral smear
Pts	Patients
RBC	Red blood cell

RBM	Red bone marrow
RCH	Reproductive and child health
Tam	Tamil
TB	Tuberculosis
Tel	Telugu
TfR	Transferrin receptor
TIBC	Total iron binding capacity
UNICEF	United Nations International Children's Emergency Fund
W.H.O	World Health Organisation

KEY TO MASTER CHART

↑F	Increased flow
A.PHOS	Alkaline phosphatase
AT	After treatment
B	Basophil
BT	Before treatment
DLC	Differential leucocyte count
E	Eosinophil
ESR	Erythrocyte sedimentation rate
Hb	Haemoglobin
I.L	Illiterate
L	Lymphocyte
Li	Literate
MHA	Microcytic hypochromic anaemia
NBP	Normal blood picture
NHA	Normocytic hypochromic anaemia
P	Polymorph

PCV	Packed cell volume
R	Regular
RBS	Random blood sugar
S.Bil	Serum bilirubin
SGOT	Serum glutamic oxaloacetic transaminase
SGPT	Serum glutamic pyruvic transaminase
TLC	Total leucocyte count

“CLINICAL STUDY OF SOOUL QUINYA BA WAJAHE QUILLATE FAULAD DORANE HAMAL (IRON DEFICIENCY ANAEMIA DURING PREGNANCY) WITH UNANI FORMULATION”

ABSTRACT

Background: Sooul quinya bawajahe quillate faulad dorane hamal (iron deficiency anaemia during pregnancy) continues to be one of the most prevalent single nutrient deficiency in the world, interventions are often planned to prevent the decrease in Haemoglobin concentration as it essential and is desirable for both the health of the mother and the well being of the growing fetus.

Objective: To determine the effect of unani formulation ‘Safoofe khabsul hadeed’ in the management of sooul quinya bawajahe quillate faulad dorane hamal and to prevent the ill effects on mother and foetus during pregnancy by iron deficiency.

Design: Randomized single blind clinical study with standard (Cap.Fefol) contol. A total 60 diagnosed cases of Sooul quinya bawajahe quillate faulad dorane hamal were included in the study, divided in two groups, group A as test group and group B as control group, each group comprising 30 patients each.

Setting: Study carried out at PHCs in Tavarekere, Hegnahalli and NIUM OPDs.

Participants: Pregnant women at their antenatal care visit in their second and third trimester were included in the study with mild to moderate iron deficiency anaemia.

Methods: Participants were randomized to receive unani formulation Safoof khabsul hadeed in capsule form in the dose of 3gm/day or control drug capsule Fefol once a day, for a study period of 45 days and minimum investigations were carried out for objective

parameters (Hb%, PCV, Peripheral smear study) and also for safety profile before and after treatment along with subjective parameters.

Results: The effect of control drug (Fefol) in group B was statistically proved significant. The test drug 'Safoofe khabsul hadeed' in test group A was also statistically significant and proved effective. The clinical features improved positively in both the groups A & B suggesting the 'Safoofe khabsul hadeed' is effective in the treatment of sooul quinya bawajahe quillate foulad dorane hamal. Majority of the pregnant anaemic patients (86.66%) noted between the age group of 16- 25 years. 80% patients belonged to the lower socioeconomic group, and majority were illiterates, Sooul quinya bawajahe quillate foulad dorane hamal recorded more in second trimester, without significant change in dietary habits like vegetarian or non vegetarian factor.

Conclusion: Iron deficiency anaemia during pregnancy is a commonest medical disorder in pregnancy which exists worldwide especially among the developing countries particularly in rural areas. In country like India it is frequent and contributes to maternal mortality and reproductive health morbidity. Therefore there is a need to correct iron deficiency anaemia on war footing as it is treatable. Supplementation by Indian system of medicine particularly unani system of medicine will definitely contribute in controlling the iron deficiency anaemia in pregnancy. The study carried out by Safoof khabsulhadeed a unani formulation for the treatment of sooul quinya ba wajahe quillate foulad dorane hamal with improved result is a clear indication with research, scientifically in this direction.

Key words: Pregnancy, Nutritional deficiency, Iron deficiency anaemia.

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**DEDICATED
TO
MY PARENTS**

INTRODUCTION

INTRODUCTION

The term anaemia is derived from Ancient Greek for "bloodlessness". It is a condition involving abnormal reduction of haemoglobin content. Red blood cells (containing haemoglobin) are the means by which oxygen is carried to the various parts of the body. Sooul quinya bawajahe quillate faulad dorane hamal (Iron deficiency anaemia during pregnancy) is a common condition amongst pregnant women, and is known to exist for centuries, but it is only in recent decades that reliable epidemiological data have become available. These findings suggest that two different situations exist: that of developing countries and industrialised countries. However, there is a degree of uncertainty over the extent to which anaemia during pregnancy affects the maternal and neonatal health and it is still uncertain, amongst those health professionals who deal with pregnant women, as to its clinical consequences (particularly in the absence of concurrent anaemia) and the best policy regarding identification and prevention.

Anaemia is one of the most prevalent nutritional deficiency problems afflicting pregnant women ¹. It has long been recognized that anaemia is a major public health problem especially among poorer segments of the population in developing countries such as India, Pakistan and Bangladesh ². Anaemia complicates pregnancy threatens the life of both the mother and the foetus. The World Health Organization defines anaemia in pregnancy as 'haemoglobin levels of 11 g/dl or less' ¹. CDC of USA considers Haemoglobin 11gm% in 1st trimester and 10.5 gm% in second trimester, If western standards are adopted most of the pregnant mothers in the low socio economic group would be classed as anaemic. Hence for practical purpose in India, anaemia in pregnancy is decrease of Haemoglobin level below 10 gm%. Here is a lot of variability owing to differences in socioeconomic conditions, lifestyles and health-seeking behaviours across various cultures. The pattern of anaemia in Asian countries

shows a trend that appears to be one of the areas of public health that requires attention. Maternal anaemia is commonly considered a risk factor for poor pregnancy outcome.³ Some studies have demonstrated a strong association between low haemoglobin before delivery and adverse outcomes⁴, However, others have not found a significant association. Thus, there is insufficient information to assess the overall adverse impact of anaemia during pregnancy.

Although pregnancy is not a disease but normal physiological process, it is associated with certain risks to health and survival, both for the mother and fetus she bears. The risk is more or less for the whole society across the globe. Developed countries have overcome these risks largely as women are in access to special care during pregnancy and child birth. Such is not the case in developing countries where each pregnancy takes a journey in to the unknown from which all the women do not return safely. In the present hi-tech era of new millennium, to our great disappointment, we are witnessing in pregnant women a marginal improved mortality status. Though there is breakthrough by continued efforts to provide safer deliveries and better care which has contributed to quite an extent in checking and reducing the sepsis and haemorrhages which causes maternal mortality. In spite of this anaemia still remains the most important indirect cause of maternal morbidity and mortality.⁵

Recently lots of programmes have been conducted on safe mother hood but maternal anaemia remains a problem of great concern. Out of an estimated 150 million deliveries occurring annually in the world, approximately 6 lakh women die from the complications of pregnancy and child birth. 35 to 50 million suffer serious acute complications and 15 to 20 million suffer from long term complications. It causes direct or indirect deaths due to cardiac failure, haemorrhage, infection, and pre eclampsia. Nearly half of the global total number of anaemic woman live in the

Indian sub continent and in India alone. The prevalence of anaemia during pregnancy may be as high as 88%, which is directly responsible for about 20% of maternal deaths and it acts as a predisposing factor in another 20%.⁶

ICMR conducted survey in 2000 in different parts of the country revealed that 87% of pregnant women suffer from anaemia, and about 10% have severe anaemia. Iron deficiency is the most common nutritional problem and around 30% of the world population is estimated to be suffering from Iron deficiency anaemia.⁷ Despite the nationwide efforts by the Government and the national prophylaxis programmes and increased number of medical personnel there is progressive increase in cases of Sooul quinya bawajahe quillate faulad dorane hamal (Iron deficiency anaemia during pregnancy) , it is unfortunate even primi gravidas are presenting with moderate to severe anaemia.⁸ Anaemia can cause adverse obstetrical outcome in the form of preterm labour, spontaneous abortion, low birth weight, and foetal growth retardation etc.

In Indian women with anaemia existing prior to pregnancy gets aggravated due to increased demand of iron and nutrients during pregnancy and also aggravated due to loss of blood at the time of delivery, and infections in the antenatal and post natal periods, in such situation rapid successive pregnancy will worsen the subsequent pregnancy.

There is need to correct anaemia in the entire women folk of the country which is possible only through improved socio economic status, education level, and elevating the position of females in the society. In India national nutritional anaemia prophylaxis programme was started in 1972, even after 3 decades since the programme is in operation, the prevalence of anaemia is in progressive and on higher

side. The magnitude of the anaemia in pregnancy and its adverse effects are same even after the 50 years of independence in fast developing nation like India, it is a real pathetic and disheartening situation.

On 15 Oct 1997 reproductive and the child health care programme was introduced to extend its services, includes pregnant women. Control of anaemia among pregnant women is one of the interventions of the programme.

In the field of medicine, the mortality and morbidity is high for those diseases in which causes are not known or if the treatment is expensive for that particular disease. It is very unfortunate and true that the cause of anaemia is known and treatment with iron therapy is affordable, with minimum three Hb% estimations during entire pregnancy to track and treat anaemia earliest to save from hazards of blood transfusion and parenteral iron therapy.⁸ To ensure maternal and perinatal health for a happy family and healthy nation the utmost need of the hour is to eradicate or at least to minimize the anaemia in pregnancy as it is very much preventable.

Multifaceted approach is needed to correct anaemia in pregnant women. It is very necessary to take anaemia seriously and manage it with due importance and on war footing to avoid its consequences and further obstetrical mishap for a condition which can be easily corrected in vast majority of cases. The enormous costs of modern medicines indicate that alternative strategies are required for better management of iron deficiency anaemia in pregnancy in under privileged and population from below poverty line, which can work out investigations and treatment wise cost effective. Traditional medicines which include Unani medicine are used throughout the world for a range of medical obstetrical problems. The study of such medicines might offer a natural key to unlock an obstetrical pharmacy for the future.